

1 **ABSTRACT**

2 A client-server architecture synchronizes streaming content with enhancing
3 content via pre-announced triggers. The architecture includes server-based
4 components to generate announcements containing information specifying how
5 and when to receive upcoming triggers that will be transmitted at a later time. The
6 server transmits the announcements to a general broadcast or multicast IP address.
7 Client-based components monitor the IP address to receive and filter the
8 announcements. Selected announcements are stored in a guide database in
9 correlation with the streaming content programs to indicate that the programs are
10 interactive. When a user tunes to an interactive program, the client opens a
11 container HTML page that contains controls to receive the streaming content
12 program and to extract the announcements from the guide database. The latter
13 control monitors the IP address at the times specified in the selected
14 announcements to receive the triggers corresponding to the interactive program.
15 The server delivers the triggers at times synchronized to the streaming content.
16 When triggers arrive, the client control processes the triggers to coordinate
17 presentation of the enhancing content with the streaming content program. The
18 triggers may further be used to carry items that fill a ticker being displayed with
19 the program.

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